Intel® Server Board S5400SF

Tested Hardware and Operating System List

Revision History

Date	Revision Number	Modifications
November 2007	1.0	Initial Release

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1.   Introduction

This document is intended to provide users of the Intel® Server Board S5400SF with a guide to the different operating systems, adapter cards, and peripherals tested by Intel on this platform.

This document will continue to be updated as new adapters, peripherals, and operating systems are tested, or until the Intel® Server Board S5400SF is no longer in production. Each new release of the document will present updated information as well as information from previous releases.

Intel will only provide support for adapters and peripherals under the specified system configuration (system BIOS and firmware revisions) and tested operating systems versions.

1.1   Test Overview

Testing performed on the Intel® Server Board S5400SF is classified as either basic installation testing, or adapter / peripheral compatibility and stress testing.

1.1.1   Basic Installation Testing

Basic installation testing is performed with each supported operating system. Basic installation testing validates that the operating system can be installed on the system correctly and that the base hardware feature set is functional. A small set of peripherals is used for installation purposes only. No add-in adapter cards are tested. On-board RAID is not tested during basic installation testing. Network connectivity is tested, and proprietary and industry standard test suites are run.

> ✑   The latest version of an operating system signifies the latest supported version at the time of the test run. Each new release of this document may list a newly supported release of a given operating system. Previous releases of a supported operating system may not be tested beyond the basic installation test process.

1.1.1.1   Support Commitment for Basic Installation Testing

Intel commits to provide the following level of customer support for operating systems that receive only basic installation testing:

- Intel will provide tested operating system drivers for each of the server board's integrated controllers, provided that the controller vendor has a driver available. Vendors are not required by Intel to develop drivers for operating systems that they do not already support. This may limit the functionality of certain server board integrated controllers.
- Intel will provide support to customers who experience issues with the integrated controllers on the server board due to the installation or functionality of the operating system if a driver is available.

- Intel will not provide support for issues related to the use of add-in adapters or peripherals installed in a server system with an operating system that received only basic installation testing.
- Support is defined as helping a customer to root cause an issue and determining an acceptable resolution to the problem. The resolution may include, but is not limited to, on-board controller driver updates, engaging the vendor, BIOS changes, firmware changes, or determining an acceptable workaround for the issue with the customer.

1.1.2   Adapter / Peripheral Compatibility and Stress Testing

Adapter / peripheral compatibility and stress testing is performed only on the most current release of a supported operating system at the time of a given validation run. The adapter / peripheral compatibility and stress testing process consists of three areas: base platform, adapter compatibility, and stress.

Base Platform: Each base platform will successfully install a given operating system, successfully run a disk stress test, and successfully run a network stress test.

Adapter Compatibility: Adapter compatibility validation (CV) testing uses test suites to gain an accurate view of how the server performs with a wide variety of adapters under the primary supported operating systems. These tests are designed to check hardware compatibility between the cards and the server platform and include functional testing only. CV testing does not include heavy stressing of the systems or the cards.

Stress Testing: This test sequence uses configurations with add-in adapters installed in all available slots (depending on the chassis used) and run for a minimum of 72-hours without errors. Each configuration passes an installation test, a network/disk stress test, and a tape backup test. Any fatal errors that occur require a complete test restart.

1.1.2.1   Support Commitment for Adapter / Peripheral Compatibility and Stress Testing

Intel is committed to providing the following level of customer support for operating systems that receive adapter / peripheral compatibility and stress testing:

- Intel will provide support to customers who experience operating system issues when installing or using the server board whether or not the adapters and peripherals listed in this document have been tested with that specific operating system.
- Support is defined as helping a customer to root cause an issue and determining an acceptable resolution to the problem. The resolution may include, but is not limited to, on-board controller driver updates, engaging the vendor, BIOS changes, firmware changes, or determining an acceptable workaround for the issue with the customer.
- Intel will provide tested operating system drivers for each on-board video, network, and storage controller.
- Intel will enable vendors to provide driver support for add-in adapters using these operating systems.
- Intel will complete selected certification steps to ensure customers do not experience problems; however, obtaining the certification is the responsibility of the individual customer.

✎   There is no support commitment for operating systems, adapter cards, and
         peripherals not listed in this document. Intel will consider requests for support
         on a case-by-case basis.

1.2   Pass/Fail Test Criteria

For each operating system, adapter, and peripheral configuration, a test passes when specific
criteria are met. There may be exceptions for some configurations with a particular
characteristic. These exceptions will be addressed on a case-by-case basis. In general, a
configuration passes testing if the following conditions are met:

- The operating system installed without error.
- Manufacturer's installation instructions or Intel's best-known methods were used for the
  operating system installation.
- No extraordinary workarounds were required during the operating system installation.
- The server system behaved as expected during and after the operating system
  installation.
- Application software installed and executed normally.
- Hardware compatibility tests ran to completion without error.
- Test software suites executed successfully
- Test and data files were created in the correct directories without error.
- Files copied from client to server and back match the original with zero errors.
- Clients remain connected to the server system.
- Industry standard test suites run to completion with zero errors.

All Intel® Server Board S5400SF testing was performed using the Intel® Server System
SR1560SF.

2.   Intel® Server Board S5400SF Base System Configurations

The following table lists the base system configurations tested. Base system configurations will change as new revisions of the Intel® Server Board S5400SF are released and/or new system BIOS and BMC firmware are cut onto the board in the factory. Each base system configuration is assigned a number that is referenced in the tables throughout this document. New base system configurations are added with each new release of this document.

✏   Intel only provides support for adapters and peripherals in the specified base system configuration and with the tested operating system version installed.

Base System Configuration Identifier #	Board Type	PBA Number	BIOS Revision	BMC Firmware Revision	HSBP Firmware Revision	Notes
1	S5400SF	D87491-401	R0018	SFBMC06	FSF_06	
2	S5400SF	D87491-401	R0019	SFBMC07	FSF_07	
3	S5400SF	D87491-402	R0018	SFBMC06	FSF_06	
4	S5400SF	D87491-402	R0019	SFBMC07	FSF_07	

3.   Supported Operating Systems

The following table provides a list of supported operating systems for the Intel® Server Board S5400SF. Each of the listed operating systems was tested for compatibility with Intel® Server Board S5400SF base system configuration listed in *Section 2* of this document. Operating systems are supported only with the specified base system configuration(s) they were tested with.

The table below also indicates whether each operating system received basic installation testing or adapter / peripheral compatibility and stress testing. For information on the support commitments for basic installation testing vs. adapter / peripheral compatibility and stress testing, please reference *Section 1* of this document.

Any variations to the standard operating system installation process are documented in the *Installation Guidelines* section of this document. If there are no installation guidelines noted in the following table, then the operating system installed as expected using the manufacturer's installation instructions or Intel's best-known methods.

✒   Operating systems supported by Intel® Server Management software or LANDesk* Client Manager software may be different than the operating systems supported by the Intel® Server Board S5400SF. Please refer to the Readme and User Guide documents that are included as part of each Intel® Server Management and LANDesk* Client Manager package for supported operating systems.

Operating System	Base System Configuration Tested & Type of Testing	Notes
Microsoft Windows Server 2003* SP2 32 bit	Configuration 1 – OS installation & Stress Configuration 2 - Stress Configuration 4 – OS installation & Compatibility	Testing was completed with Microsoft Windows Server 2003*. The Intel® Server Board S5400SF supports the operating system portion of Microsoft Windows Server 2003* SP2 32 bit only. The application portion is not tested or supported.
Microsoft Windows Server 2003* SP2 64 bit	Configuration 1 – OS installation & Stress Configuration 2 - Stress Configuration 4 – OS installation & Stress	Testing was completed with Microsoft Windows Server 2003*. The Intel® Server Board S5400SF supports the operating system portion of Microsoft Windows Server 2003* SP2 64 bit only. The application portion is not tested or supported.
Red Hat* Enterprise Linux AS 5.0 32 bit	Configuration 1 – OS installation & Stress Configuration 2 – OS installation Configuration 3 –Stress Configuration 4 – Compatibility	Testing was completed with Red Hat* Enterprise Linux AS 5.0 32 bit. The Intel® Server Board S5400SF supports the operating system portion of Red Hat* Enterprise Linux AS 5.0 32 bit only. The application portion is not tested or supported.

Operating System	Base System Configuration Tested & Type of Testing	Notes
Red Hat* Enterprise Linux AS 5.0 64 bit	Configuration 1 – OS installation & Stress Configuration 2 – OS installation	Testing was completed with Red Hat* Enterprise Linux AS 5.0 64 bit. The Intel® Server Board S5400SF supports the operating system portion of Red Hat* Enterprise Linux AS 5.0 64 bit only. The application portion is not tested or supported.
SUSE* Linux Enterprise Sever 10 SP1 32 bit	Configuration 1 – OS installation & Stress Configuration 2 – OS installation Configuration 3–Stress Configuration 4 – Compatibility	Testing was completed with SUSE* Linux Enterprise Sever 10 SP1 32 bit. The Intel® Server Board S5400SF supports the operating system portion of SUSE* Linux Enterprise Sever 10 SP1 32 bit only. The application portion is not tested or supported.
SUSE* Linux Enterprise Sever 10 SP1 64 bit	Configuration 1 – OS installation Configuration 2 – OS installation & Stress Configuration 4 – Stress	Testing was completed with SUSE* Linux Enterprise Sever 10 SP1 64 bit. The Intel® Server Board S5400SF supports the operating system portion of SUSE* Linux Enterprise Sever 10 SP1 64 bit only. The application portion is not tested or supported.

3.1   Operating System Certifications

Listed below are the operating systems certified with the Intel® Server Board S5400SF. Each customer is responsible for their own certification from the individual operating system vendors. In many cases, the customer may leverage their operating system certifications from the testing completed by Intel. See the comments column in the table below for more information. Intel's certifications, pre-certification, and operating system testing might make it easier to obtain customer certifications from the operating system vendors.

Operating System	Certification Listing	Comments
TBD		

4. Adapters and Peripherals

Add-in adapter card and peripheral compatibility and stress testing will only be performed with the latest version of an operating system available at the time of testing. The following table shows the operating system and base system configurations used to validate each device. The adapters are divided into categories based on their functionality. All integrated on-board devices are tested by default and are therefore not included in the following tables.

Not all adapter cards were tested with all operating systems. The following notation is used in the tested adapters and peripherals table below to indicate the support level that Intel provides for a particular adapter under a particular operating system:

Number (i.e. 1)	This adapter or peripheral has been tested and is supported under the specific configuration identified in the Base System Configurations Table in Section 2 of this document.
Number in brackets (i.e. [1])	This adapter or peripheral has been tested, but is NOT supported under the specific configuration identified in the Base System Configurations Table in Section 2 of this document.
NT	This adapter or peripheral has not been tested under this operating system and is not supported under this operating system.
ND	This adapter or peripheral has not been tested under this operating system due to limitations in IHV driver availability, and is not suported under this operating system.
SA (Similar Adapter)	This adapter is supported, but has not been tested with this server board. Intel will support the adapter based on successful testing of a similar product from the same adapter family. Intel has high confidence that this adapter will function correctly with the server board. This adapter uses the same firmware and drivers, and has a nearly identical system interface to another adapter of the same family that has been successfully tested with this server board. In addition, Intel has secured IHV commitment to support the similar adapter equally. Customers should always test an adapter as part of the final system configuration prior to deployment. All installation guidelines for the tested adapter also apply to the similar adapter.

Any variations to the standard adapter installation process or to expected adapter functionality are documented in the Installation Guidelines section of this document. If there are installation guidelines affecting a particular adapter and operating system combination, these are referenced in the following table. If there are no installation guidelines noted in the following table, then the adapter installed and functioned as expected using manufacturer's installation instructions or Intel's best-known methods.

> ✐   Adapters cards are normally tested with the unused add-in adapters and on-board controller expansion ROMs disabled in BIOS setup. Intel recommends that customers disable the option ROM for add-in controllers and/or the on-board controllers when not booting from the controller or using the built in utilities.

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003* SP2 32 bit	Microsoft Windows Server 2003* SP2 64 bit	Red Hat* Enterprise Linux AS 5.0 32 bit	Red Hat* Enterprise Linux AS 5.0 64 bit	SUSE* Linux Enterprise Sever 10 SP1 32 bit	SUSE* Linux Enterprise Sever 10 SP1 64 bit
4.1 PCI NIC										
Syskonnect	SK-9E22	SK-9E22	PCI Express*		4	4	[4]	[4]	[4]	[4]
Intel	Intel® PRO/1000 PT Server Adapter	EXPI9400PT	PCI Express*		4	4	4	4	4	4
Intel	Intel® PRO/1000 PF Server Adapter	EXPI9400PF	PCI Express*		SA	SA	SA	SA	SA	SA
Intel	Intel® PRO/1000 PT Server Adapter	EXPI9300PT	PCI Express*		SA	SA	SA	SA	SA	SA
Intel	Intel® PRO/1000 PT Dual Port Server Adapter	EXPI9402PT	PCI Express*		4	4	4	4	4	4
Intel	Intel® PRO/1000 PF Dual Port Server Adapter	EXPI9402PF	PCI Express*		SA	SA	SA	SA	SA	SA
4.2 PCI HW RAID SAS										
Intel	Intel® RAID Controller SRCSAS144E	SRCSAS 144E	PCI Express*		4	4	4	4	4	4
4.3 PCI Fiber Channel										
LSI Logic	LSI7204EP-LC	LSI7204EP-LC	PCI Express*		4	4	4	4	4	4
LSI Logic	LSI7104EP-LC	LSI7104EP-LC	PCI Express*		SA	SA	SA	SA	SA	SA
LSI Logic	LSI7404EP-LC	LSI7404EP-LC	PCI Express*		SA	SA	SA	SA	SA	SA
Emulex	LP10000ExDC	LP10000ExDC-M2	PCI Express*		4	4	4	4	4	4

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003* SP2 32 bit	Microsoft Windows Server 2003* SP2 64 bit	Red Hat* Enterprise Linux AS 5.0 32 bit	Red Hat* Enterprise Linux AS 5.0 64 bit	SUSE* Linux Enterprise Sever 10 SP1 32 bit	SUSE* Linux Enterprise Sever 10 SP1 64 bit
Emulex	LP10000Ex	LP10000Ex-M2	PCI Express*		SA	SA	SA	SA	SA	SA
Qlogic	QLE2462	QLE2462	PCI Express*		4	4	4	4	4	4
Qlogic	QLE2460	QLE2460	PCI Express*		SA	SA	SA	SA	SA	SA

4.4   Video

ASUS	ATI X1300	EAX1300/TD/256 M	PCI Express*		4	4	[4]	[4]	[4]	[4]
ATI	ATI X1300(R515)	X1300	PCI Express*		SA	SA	SA	SA	SA	SA

4.5   Infiniband*

Mellanox	Infinihost* III Ex	MHGA28-XTC	PCI Express*		4	4	4	4	4	4
Mellanox	Infinihost* III Ex	MHGA28-1TC	PCI Express*		SA	SA	SA	SA	SA	SA
Mellanox	Infinihost* III Ex	MHEA28-XTC	PCI Express*		SA	SA	SA	SA	SA	SA
Mellanox	Infinihost* III Ex	MHEA28-1TC	PCI Express*		SA	SA	SA	SA	SA	SA
Voltaire	HCA 4X0	400Ex	PCI Express*		SA	SA	SA	SA	SA	SA
Voltaire	HCA 4X0	400Ex-D	PCI Express*		SA	SA	SA	SA	SA	SA

4.6   CD ROM Drives

Samsung	SN-124P	SN-124P	IDE/Slimline		4	4	4	4	4	4

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003* SP2 32 bit	Microsoft Windows Server 2003* SP2 64 bit	Red Hat* Enterprise Linux AS 5.0 32 bit	Red Hat* Enterprise Linux AS 5.0 64 bit	SUSE* Linux Enterprise Sever 10 SP1 32 bit	SUSE* Linux Enterprise Sever 10 SP1 64 bit
TEAC	CD-224E-NZ3	CD-224E-NZ3	IDE/Slimline		4	4	4	4	4	4

4.7   DVD Drives

Iomega	Super DVD Writer 16x16 Dual Layer	Super DVD Writer 16x16 Dual Layer	IDE/Slimline		4	4	4	4	4	4
HLDS	GWA-4082N	GWA-4082N	IDE/Slimline		4	4	4	4	4	4
TEAC	DV-224E-C93	DV-224E-C93	IDE/Slimline		4	4	4	4	4	4
TEAC	DV-224E-C83	DV-224E-C83	IDE/Slimline		4	4	4	4	4	4
TEAC	DV-28EN83	DV-28EN83	IDE/Slimline		4	4	4	4	4	4
TEAC	DV-28E	DV-28E	IDE/Slimline		4	4	4	4	4	4
Toshiba	SD-R2212	SD-R2212	IDE/Slimline		4	4	4	4	4	4

4.8   Input

Logitech	G5 Laser mouse	G5 Laser mouse	USB 2.0		4	4	4	4	4	4

4.9   Removable Media

SanDisk	Cruzer Mini USB Flash	SDCZ2-4096	USB 2.0		4	4	4	4	4	4
TEAC	FD-O5PUB	FD-O5PUB	USB		4	4	4	4	4	4
TEAC	FD05PUW268	FD05PUW268	USB		4	4	4	4	4	4
TEAC	FD005U396	FD005U396	USB		4	4	4	4	4	4
PNY	Attache' 2 GB	P-FD02GU20	USB 2.0		4	4	4	4	4	4
Memorex	1 GB Travel Drive	32509363	USB 2.0		4	4	4	4	4	4

Manufacturer	Model Name	Model Number	Interface	Comments	Microsoft Windows Server 2003* SP2 32 bit	Microsoft Windows Server 2003* SP2 64 bit	Red Hat* Enterprise Linux AS 5.0 32 bit	Red Hat* Enterprise Linux AS 5.0 64 bit	SUSE* Linux Enterprise Sever 10 SP1 32 bit	SUSE* Linux Enterprise Sever 10 SP1 64 bit
Sony	VAIO USB floppy drive	VPG-UFD1	USB		NT	NT	NT	NT	NT	NT

5.   Hard Disk Drives

A list of qualified hard drives for the Intel® Server Board S5400SF is now available in the *Server Hard Drive Validation Test Report*. See
http://www.intel.com/support/motherboards/server/sb/CS-025416.htm.